

REMARKS

These remarks are made in support of the newly amended claims that are submitted herewith in light of the art that was cited and applied in the parent cases corresponding to this application. The principle references that were applied are Caldwell (U.S. patent 1,208,474), Albert (U.S. patent 4,288,697), Millenaar (U.S. patent 2,336,026), and a publication by O. Mattsson from "Acta Radiologica 1955", Suppl. 120, pages 85 - 153. A discussion of each follows.

Caldwell

The Caldwell reference discloses an x-ray grid that is composed of thin strips of lead (an x-ray absorbent material) having cells for the transmission of the x-rays that are oriented such that the diagonals of the cells are preferentially parallel or perpendicular to the sides of the grid.

The Office has rejected the claims prior to this amendment, claims 29 - 32 and as being anticipated or obvious in light of Caldwell stating that it would have been at least obvious for one to cover the main body of Caldwell with a x-ray absorbent layer to "eliminate x-ray scattering therefrom".

Applicant fails to understand the motivation to cover the *x-ray absorbent* grid of Caldwell with *another x-ray absorbent layer*. Applicant points out that the grid of Caldwell is *already* constructed of a x-ray absorbent material, namely *lead*. Covering the Caldwell grid with a further x-ray absorbent material suggests no additional beneficial properties to the combination. ***It adds insignificant strength, since x-ray absorbent materials do not possess the stability and strength, required to stabilize the grid. It does not make it more absorbent. It is already absorbent.***

In a telephone interview with Examiner Church, the Examiner in charge of the prior applications, it was suggested that the grid of Caldwell was formed by layering the strips of lead on top of each other to form a laminate structure. It was suggested by the Examiner that each layer of the laminate (lead strips) could individually be considered a main body and another layer of the laminate (again a lead strip) be considered the x-ray absorbent covering. In response to

this suggestion, applicant and applicant's attorney have reread the Caldwell reference very carefully and can find *no* teaching that Caldwell's grid is formed in a stacked or laminate structure. The grid is composed of a *single* layer of lead strips. In contrast, applicant's claims recite in claims 29, 44, and 45 (independent claims) that applicant's grid is a two layer structure, having a main part and an x-ray absorbing layer.

Applicant's claims recite that the x-ray transmissive cells are filled with gas or are vacuumed. Caldwell, on the other hand, is silent regarding the composition of the cells for transmitting the x-rays other than to suggest that they be filled with a binding material such as bakelite or the like. To suggest that "or the like" implies that the cells are air filled is tenuous. The disclosure of Caldwell clearly does *not suggest or imply* that the cells are filled with a gas or vacuumed because it is *silent* on the matter. The currently amended claims clearly distinguish over the Caldwell teaching's in that they recite that the transmissive cells are *filled with a gas or a vacuum*.

Albert

The Albert reference teaches an x-ray grid that is composed again of a laminate. The laminate is however a combination of an x-ray opaque material and an x-ray transmissive material. Unlike the instant invention, the x-ray transmissive material completely covers the x-ray transmissive cells. In the current invention and as claimed, the cells extend completely through the structure. In Albert, staggered layers of x-ray transmissive material exist within the cells.

Millenaar

The Office has previously rejected claims 37 - 39 under 35 U.S.C. 103, as being unpatentable over Caldwell in light of Millenaar. The Office states that while Caldwell does not disclose a grid having a covering, Millenaar does disclose a cover for a grid. It would thus be obvious for one to cover the grid of Caldwell with a cover as disclosed by Millenaar.

In addressing the Millenaar rejection, applicant incorporates into this response the previous comments as pertaining to Caldwell. Specifically, applicant points out that Caldwell does not teach a main body, including a frame, which are fully enclosed by an x-ray absorbent material. Further, while Millenaar discloses a cover for his linear grid, he does so in the context of the manufacture of a composite material from which an x-ray grid may be constructed. He does not teach or even suggest, as the claims recite, that the cover designed to enclose layers of the grid material also *cover and seal the cells* provided in the main body of a grid in order to give additional structure to the grid, and also seal the cells to contain either a gas or sustain a vacuum therein.

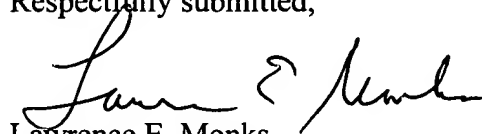
Mattsson

Claims 40 and 42 were rejected as being obvious over Caldwell in light of the Mattsson reference. The Office submits that it would have been obvious to fabricate the grid as taught by Caldwell with partitions angled as described in Mattsson to achieve greater performance.

Applicant initially points out that claims 40 and 42 are dependent claims that depend on claims 33 and 41 respectfully. Consequently, applicant incorporates herein the arguments previously put forth to address and traverse the obviousness rejection of these independent claims. Further, applicant points out that in the present application the cells are angled oblique to one edge of the grid so that simple rectilinear motion parallel to that edge causes the cells to move at the Mattsson angles. In contrast, Mattsson describes a *conventional grid* with the cells having sidewalls parallel to the edges of the grid. This conventional grid is then moved in manner so that the cells have a trajectory over a patient in agreement with the Mattsson angles. In the instant invention the cells are formed so that the trajectory of the radiation source over the cells is in compliance with the angles of Mattsson, when the grid is moved parallel to the longitudinal axis of the grid. In the Mattsson reference, the cells are formed so that the sides of the cells are parallel to the sides of the grid, and consequently the grid must be moved in a motion that is not parallel to the longitudinal side of the grid to satisfy the angles of Mattsson.

Applicant submits that the claims are in a condition for allowance and respectfully requests that same. Applicant's attorney would welcome a telephone interview with the Examiner if he believes that would expedite prosecution of the application.

Respectfully submitted,



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